



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,287	05/08/2001	Johannes J. Verboom	18504/337	3428

7590 09/02/2003

Oppenheimer Wolff & Donnelly LLP  
45 South Seventh Street, Suite 3300  
Minneapolis, MN 55402-1609

EXAMINER
----------

NGUYEN, TUAN M

ART UNIT	PAPER NUMBER
----------	--------------

2828

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/851,287

Applicant(s)

VERBOOM ET AL.

Examiner

Tuan M Nguyen

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
PAUL IP  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 32 are confusing, vague and indefinite. The claims recite a laser noise control system operating in conjunction with a laser driver so as to control a laser. The claimed limitations can not be read in figure 1 of the invention. It is not clear as how the laser noise control system is operating "in conjunction" with a laser driver so as to control a laser. It is not clear as whether the laser driver and the laser are part of the laser noise control system, or the laser driver and the laser are separated part of the laser noise control system. The claims further recite an optical sensor and a noise reduction feedback network comprising a filter circuit. The claims fail to provide a clear structure as shown in figure 1 of the invention. It is not clear as how the noise reduction feedback network and the filter element are configured in order to provide the laser noise control system of the invention.

Claims 1, 12, 20, 27 and 32 fail to recite “a switch 70” as shown in figure 1 of the invention. The switch 70 holds the key part of the noise feedback in order to control the noise reduction of the laser.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Masuda et al (US patent 5,303,250).

With respect to claim 1, Masuda et al discloses a laser driver (8), a laser (1), a beam splitter (21) positioned to receive the optical signal and output a first portion and a second portion, a photo detector (22) positioned to receive the first portion of the optical signal, the optical sensor thus capable of producing a sensor output and to the laser, the feedback network includes a differential amplifier (23), a reference voltage generator (24) and phase compensator circuit (25) and the adder (26) combined the laser driver (8) signal and the feedback signal from phase compensator circuit (25) to provide to laser (1), note col. 5 line 7 to col. 6 line 59, see fig. 7.

With respect to claims 2-11, 13-19, 21-26, 28-31 and 33-39, Masuda et al discloses the feedback configured includes an amplifier (23), a reference voltage generator (24) and phase

Art Unit: 2828

compensator circuit (25), an adder (26), the control means including a comparator means for comparing an output of said detecting means and driving means for driving said laser medium from an output of said comparator, note col. 1 line 12 to col. 13 line 20.

With respect to claims 12, 20, 27 and 32, Masuda et al discloses a laser driver (8), a laser (1), a splitter (21) a photo detector (22), a differential amplifier (23), a phase compensator circuit (25) is a feedback network, an adder (26) and a control means including a comparator having an output connected to a phase compensation circuit which output signal to an adder is consider as a processor., note col. 5 line 7 to col. 13 line 20, see fig 7.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Mihara et al (US patent 5,506,716).

With respect to claim 1, Mihara et al discloses a laser driver (112), a laser (113), a beam splitter (116) positioned to receive the optical signal and output a first portion and a second portion, a photo detector (117) positioned to receive the first portion of the optical signal, the optical sensor thus capable of producing a sensor output and to the laser, the feedback network includes a preamplifier (125), an automatic gain control circuit (118), a noise detection (120), a

Art Unit: 2828

wavelength change request detection circuit (301), a wavelength controller (303) and a wavelength change request generator (304), the feedback signal combined with the laser driver signal and provided to the laser, note col. 9 line 45 to col. 12 line 27, see fig. 6B.

With respect to claims 2-11, 13-19, 21-26, 28-31 and 33-39, Mihara et al discloses a feedback network loop includes a preamplifier (125), an amplifier (135), automatic gain control circuit (118), a noise detection (120), a wavelength change request detection circuit (301) a wavelength controller (303) a wavelength change request generator (304), a band pass filter (130), a low pass filter (134) and a CPU (302) includes a processor and memory, note col. 9 line 39 to 23 line 53, see figured 6B, 8, 13 and 17-18.

With respect to claims 12, 20, 27 and 32, Mihara et al discloses a laser driver (112), a laser (113), a splitter (116), a photo detector (117), a feedback network includes a preamplifier (125), an amplifier (135), automatic gain control circuit (118), a noise detection (120), a wavelength change request detection circuit (301) a wavelength controller (303) a wavelength change request generator (304), a processor (302), note col. 9 line 40 to col. 23 line 53, see figures 6B-18.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

### Citation Of The Pertinent References

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patent to Kuo et al (US patent 6,222,861) discloses method and apparatus for controlling the wavelength of a laser.

The patent to Majima (US patent 5,886,802) discloses wavelength control method and optical communication apparatus for performing wavelength division multiplex communication.

The patent to Miyai et al (US patent 5,825,793) discloses laser and laser-applied units.

The patent to Endo et al (US patent 5,329,395) discloses optical atmospheric communication system.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2828

***Communication Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan M Nguyen whose telephone number is (703) 306-0247.

The examiner can normally be reached on 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.



Paul Ip  
SPE  
Art unit 2828

TMN  
August 4, 2003